

Fact Sheet



For Final Renewal Permitting Action Under 45CSR30 and Title V of the Clean Air Act

Permit Number: **R30-01700011-2012**
Application Received: **July 28, 2011**
Plant Identification Number: **01700011**
Permittee: **Dominion Transmission, Inc.**
Facility Name: **West Union Plant**
Mailing Address: **445 West Main Street**
Clarksburg, WV 26301

Physical Location:	West Union, Doddridge County, West Virginia
UTM Coordinates:	516.45 km Easting • 4352.50 km Northing • Zone 17
Directions:	5 miles north of West Union on Highway 18, Doddridge County

Facility Description

The West Union Plant is a natural gas liquids extraction facility. Propane and heavier components of natural gas are removed through a turbo-expander cryogenic process, and a mixed natural gas liquids product is produced. It is covered by primary Standard Industrial Code (SIC) 1321 and secondary SIC 4922. The plant has the potential to operate seven (7) days per week, twenty-four (24) hours per day. The plant consists of two (2) 730-hp natural gas fired reciprocating engines and 8 storage tanks.

Emissions Summary

Plantwide Emissions Summary [Tons per Year]		
Regulated Pollutants	Potential Emissions	2010 Actual Emissions
Carbon Monoxide (CO)	12.7	7.55
Nitrogen Oxides (NO _x)	267.88	159.25
Particulate Matter (PM ₁₀)	0.54	0.32
Total Particulate Matter (TSP)	0.54	0.32
Sulfur Dioxide (SO ₂)	0.03	0
Volatile Organic Compounds (VOC)	77.68	51.97

Hazardous Air Pollutants	Potential Emissions	2010 Actual Emissions
Formaldehyde	1.16	0.69
Acrolein	0.16	0.09
Acetaldehyde	0.15	0.09
Benzene	0.09	0.05
Ethylbenzene	< 0.01	0
Toluene	0.03	0.02
Xylene	0.01	0.01
TOTAL HAPs	1.61	0.95
Regulated Pollutants other than Criteria and HAP:		
CO ₂ e	6,827.65	Not reported

Some of the above HAPs may be counted as PM or VOCs.

Title V Program Applicability Basis

This facility has the potential to emit 267.88 tons/yr of NO_x. Due to this facility's potential to emit over 100 tons per year of criteria pollutant, Dominion Transmission, Inc is required to have an operating permit pursuant to Title V of the Federal Clean Air Act as amended and 45CSR30.

Legal and Factual Basis for Permit Conditions

The State and Federally-enforceable conditions of the Title V Operating Permits are based upon the requirements of the State of West Virginia Operating Permit Rule 45CSR30 for the purposes of Title V of the Federal Clean Air Act and the underlying applicable requirements in other state and federal rules.

This facility has been found to be subject to the following applicable rules:

Federal and State:	45CSR6	Open burning prohibited.
	45CSR11	Standby plans for emergency episodes.
	45CSR13	Pre-construction permit
	45CSR16	Standards of Performance for New Stationary Sources 40CFR60
	WV Code § 22-5-4 (a) (14)	The Secretary can request any pertinent information such as annual emission inventory reporting
	45CSR30	Operating permit requirement
	40 C.F.R. Part 60, KKK	Equipment leaks of VOC from Onshore Natural Gas Processing Plants
	40 C.F.R. Part 60, VV ¹	Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry
	40 C.F.R. Part 61	Asbestos inspection and removal
	40 C.F.R. Part 63, Subpart ZZZZ	National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines
	40 C.F.R. Part 82, Subpart F	Ozone depleting substances
State Only:	45CSR4	No objectionable odors.
	45CSR17	Particulate Fugitive

Each State and Federally-enforceable condition of the draft Title V Operating Permit references the specific relevant requirements of 45CSR30 or the applicable requirement upon which it is based. Any condition of the draft Title V permit that is enforceable by the State but is not Federally-enforceable is identified in the draft Title V permit as such.

The Secretary's authority to require standards under 40 C.F.R. Part 60 (NSPS), 40 C.F.R. Part 61 (NESHAPs), and 40 C.F.R. Part 63 (NESHAPs MACT) is provided in West Virginia Code §§ 22-5-1 *et seq.*, 45CSR16, 45CSR34 and 45CSR30.

Active Permits/Consent Orders

Permit or Consent Order Number	Date of Issuance	Permit Determinations or Amendments That Affect the Permit (<i>if any</i>)
None		

Conditions from this facility's Rule 13 permit(s) governing construction-related specifications and timing requirements will not be included in the Title V Operating Permit but will remain independently enforceable under the applicable Rule 13 permit(s). All other conditions from this facility's Rule 13 permit(s) governing the source's operation and compliance have been incorporated into this Title V permit in accordance with the "General Requirement Comparison Table B," which may be downloaded from DAQ's website.

¹Although this facility is not subject to 40 C.F.R. 60 Subpart VV, many sections of Subpart VV are incorporated by reference in 40 C.F.R. 60 Subpart KKK

Determinations and Justifications

The following are changes/additions to the most recent Title V permit for this facility:

1. Emission Units Table 1.1 – added Tanks TK01 - TK08. These Tanks do not have applicable requirements (see Non-Applicability Determinations section below, items 2 through 4).
2. Section 4.0 - added to include provisions of Part 63 Subpart ZZZZ “*National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*” applicable to the following reciprocating internal combustion engines (RICE):

Engine	Design Capacity	Ignition	Use/Type	Year installed	HAP Source Classification
001-01*	730 HP	Spark Ignited	Non-emergency, 4Stroke Rich Burn	1984 (existing)*	Area source
001-02*	730 HP	Spark Ignited	Non-emergency, 4Stroke Rich Burn	1984 (existing)*	Area source

* area source units constructed before June 12, 2006 (§63.6590(a)(1)(iii))

3. Appendix A - added section **§60.633 Exceptions** to Part 60 Subpart KKK applicable requirements.
4. Appendix B was added to include applicable requirements of 40 C.F.R. 60 Subpart VV.

Non-Applicability Determinations

The following requirements have been determined not to be applicable to the subject facility due to the following:

1. 40 C.F.R. 63, Subpart HH “National Emission Standards for Hazardous Air Pollutants From Oil and Natural Gas Production Facilities” is not applicable to West Union plant because it doesn’t have a “triethylene glycol (TEG) dehydration unit located at a facility” (as per 40 C.F.R. §63.760(b)(2)). Additionally, the Subpart HH requirements for natural gas liquids extraction do not apply to non-Major/Area HAP sources.
2. 40 C.F.R. 60, Subpart K “Standards of Performance for Storage Vessels for Petroleum Liquids for which Construction, Reconstruction or Modification Commenced after June 11, 1973 and prior to May 19, 1978” – all tanks were constructed after July 23, 1984, therefore they are exempt from this subpart.
3. 40 C.F.R. 60, Subpart Ka “Standards of Performance for Storage Vessels for Petroleum Liquids for which Construction, Reconstruction or Modification Commenced after May 18, 1978 and prior to July 23, 1984” – all tanks were constructed after July 23, 1984, therefore they are exempt from this subpart.
4. 40 C.F.R. 60, Subpart Kb “Standards of Performance for VOC Storage Vessels for Which Construction, Reconstruction or Modification Commenced after July 23, 1984” : tanks TK01 through TK05 are below the minimum size threshold of 75 m³ (19,813 gal), therefore they are exempt from the requirements of this Subpart per 40 CFR §60.110b(a) . The NGL tanks (TK06 – TK08) size (30,000 gal) is in the applicable range of 75 m³ - 151 m³ (19,813 gal - 39,890 gal), but they are pressure vessels designed to operate at 1,034 kPa (in excess of 204.9 kPa), and do not have emissions to the atmosphere. Therefore, they are exempt per 40 CFR §60.110b(d)(2).
5. 40 C.F.R. 64 - Engines do not have any control; Therefore, in accordance with 40 C.F.R. §64.2(a)(2), CAM is not applicable to the engines.

6. There are no Greenhouse Gas Clean Air Act requirements for this facility because this renewal has not triggered a PSD permit.

Request for Variances or Alternatives

None.

Insignificant Activities

Insignificant emission unit(s) and activities are identified in the Title V application.

Comment Period

Beginning Date: January 10, 2012
Ending Date: February 9, 2012

All written comments should be addressed to the following individual and office:

Natalya V. Chertkovsky-Veselova
Title V Permit Writer
West Virginia Department of Environmental Protection
Division of Air Quality
601 57th Street SE
Charleston, WV 25304

Procedure for Requesting Public Hearing

During the public comment period, any interested person may submit written comments on the draft permit and may request a public hearing, if no public hearing has already been scheduled. A request for public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. The Secretary shall grant such a request for a hearing if he/she concludes that a public hearing is appropriate. Any public hearing shall be held in the general area in which the facility is located.

Point of Contact

Natalya V. Chertkovsky-Veselova
West Virginia Department of Environmental Protection
Division of Air Quality
601 57th Street SE
Charleston, WV 25304
Phone: 304/926-0499 ext. 1220 • Fax: 304/926-0478

Response to Comments (Statement of Basis)

- 1) **Mike Gordon from EPA, Region III** submitted the following comments via email on February 8, 2012:

Comment: Fact Sheet

On Page 3 of 5, the subtext at the bottom of the page says "Requirements incorporated by reference in 40 CFR, 60 Subpart KKK." I would suggest removing that phrase and adding the first sentence of the second paragraph of condition 3.2.1 as the subtext, "Although this facility is not subject to 40 C.F.R. 60 Subpart VV, many sections of Subpart VV are incorporated by reference in 40 C.F.R. 60 Subpart KKK" to make it clear that VV is not applicable to the facility.

Response:

The suggested change to the Fact Sheet footnote (page 3) was made.

Comment: Condition 3.2.1

Typo in last sentence of second paragraph: Change "Appendix B" to Appendix B

Response:

The typo was corrected.

Comment: Condition 4.2.1

§63.6635 (b) that is included in the permit is from an older version of the subpart (newer version has minor differences), please update the citation to have wording from the current subpart.

"(b) Except for monitor malfunctions, associated repairs, required performance evaluations, and required quality assurance or control activities, you must monitor continuously at all times that the stationary RICE is operating. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions."

Response:

The requirement 4.2.1 language was updated to correspond to the most current version of the 40CFR63 Subpart ZZZZ.

- 2) On February 10, 2012 public comments were received from the Law Office of Vincent Trivelli, PLLC. The original comment letter and the following response letter issued by the DAQ are included here as follows:

The Law Office of Vincent Trivelli, PLLC

178 Chancery Row
Morgantown, West Virginia 26505
Phone (304) 291-5223 • Toll Free 1-866-266-5948
Fax (304) 291-2240 • E-mail: vmtriv@westco.net

February 9, 2012
(via email & U.S. Mail)



Natalya Chertkovsky-Veselova
WV Department of Environmental Protection
Division of Air Quality
601 57th Street, SE
Charleston, WV 25304

RE: Dominion Transmission, Inc.
West Union Plant, Doddridge County
Renewal Permit R30-01700011-2007

Dear Ms. Chertkovsky-Veselova:

Enclosed for your review are the comments prepared by Carpenter Environmental Associates, regarding the above-referenced matter. These comments are being submitted on behalf of the Affiliated Construction Trades Foundation, a division of the West Virginia Building and Construction Trades Council, AFL-CIO.

Should you have any question or comments regarding the enclosed, please feel free to contact me at (304) 291-5223.

Thank you.

Yours truly,

A handwritten signature in blue ink, appearing to read "Vincent Trivelli".

Vincent Trivelli

Enclosure



Technical and Regulatory Assessment

of

Renewal of Permit R30-01700011-2007

by

West Virginia Department of Environmental Protection
Division of Air Quality

for

West Union Extraction Plant, West Union, Doddridge County, West Virginia
Dominion Transmission, Inc.

Assessment Performed

by

Carpenter Environmental Associates, Inc.
307 Museum Village Road
Monroe, NY 10950

For

Affiliated Construction Trades Foundation
Morgantown, West Virginia

February 2012



1.0 Overview

Dominion Transmission, Inc. has submitted a renewal application to the West Virginia Department of Environmental Protection (WVDEP) pursuant to the West Virginia Air Pollution Control Act. The renewal is intended for the Title V operating permit (R30-01700011-2012) for the West Union Extraction Plant in Doddridge County.

The Affiliated Construction Trades Foundation requested that Carpenter Environmental Associates, Inc. (CEA) review the permit application with respect to technical sufficiency and regulatory applicability. This report is a summary of the requested technical and regulatory assessment. It was prepared with the assistance of EN3 Professionals, LLC.

2.0 Assessment of Key Air Pollutants

The West Union Extraction Plant is currently considered a major stationary source of emissions, with potential and actual emissions of criteria and hazardous air pollutants as described in the table below.

Facility-Wide Emissions Summary [Tons per Year]	
<i>Criteria Pollutants</i>	<i>Potential Emissions</i>
Carbon Monoxide (CO)	12.70
Nitrogen Oxides (NO _x)	267.88
Lead (Pb)	N/A
Particulate Matter (PM _{2.5})	0.54
Particulate Matter (PM ₁₀)	0.54
Total Particulate Matter (TSP)	0.54
Sulfur Dioxide (SO ₂)	0.03
Volatile Organic Compounds (VOC)	77.68
<i>Hazardous Air Pollutants</i>	<i>Potential Emissions</i>
Formaldehyde	1.16
Acrolein	0.16
Acetaldehyde	0.15
Benzene	0.09
Ethylbenzene	<0.01
Toluene	0.03
Xylene	0.01
<i>Regulated Pollutants other than Criteria and HAP</i>	<i>Potential Emissions</i>
Carbon Dioxide Equivalent (CO ₂ e)	6827.65

This assessment examines the principal air pollutants emitted from the facility. The grouping of air pollutants reflects the designations pursuant to the Clean Air Act and corresponding West Virginia statutes and regulations i.e. criteria, hazardous, other.

2.1 Criteria Air Pollutants

2.1.1 Nitrogen Oxides (NO_x)

NO_x form a class of gases emitted by the combustion process which lead to the creation of ground-level ozone (O₃), a precursor of smog. NO_x also are "acid gases" and contribute to acid rain and deposition. At elevated levels, NO_x can also cause respiratory problems in humans. At approximately 268 tons emitted per year, NO_x are the criteria pollutants with the largest emissions from the plant.

2.1.2 Volatile Organic Compounds (VOCs)

VOCs include a number of chemicals which are easily vaporized and transported in the air, many of which have short- and/or long-term negative health effects on humans. Additionally, VOCs are a key precursor pollutant (along with NO_x) to the formation of tropospheric ozone (O₃). VOCs constitute the second largest class of criteria pollutants emitted by the plant. It is noteworthy that the greatest potential source of VOCs is the collection of storage vessels.

2.1.3 Carbon monoxide (CO)

CO is a colorless, odorless gas emitted as a by-product of the combustion process from engines, boilers, power plants, etc. At higher than recommended levels it can interfere with the human body's ability to take up oxygen, and at extremely high levels it can lead to death. CO is the third largest criteria pollutant emitted by the plant.

2.2 Hazardous Air Pollutants (HAPs)

In addition to the criteria air pollutants discussed in Section 2.1, various HAPs are emitted from the facility. According to the permit application, the primary HAP emitted is formaldehyde, with a potential - to - emit level of 1.16 tons per year. While the emissions of this and other HAPs are projected to be below the threshold for "major source" determination, formaldehyde, in particular, is odorous and a known human carcinogen. Thus, formaldehyde emissions from the Craig plant may be noxious and could have direct impacts on the health of any nearby residents.

3.0 Conclusions

The West Union Extraction Plant is a major stationary source of criteria pollutants and a minor source of HAPs, emitting levels of these various pollutants which contribute significantly to the deterioration of air quality in the region and immediate vicinity of the plant. It is worth noting that the primary contributors to these emissions are the 28 year old compressor engines. Newer models emit substantially less NO_x (on the order of 1/10th as much). If Dominion were to replace the two engines at the facility, it could bring

emissions below the level which constitutes a major source (thus lightening their regulatory burden), and take a step toward improving the air quality in the region.

Concurrently the mass of VOCs emitted is substantial for a major source. Of the almost 78 tons per year of VOCs emitted, approximately 82% are in the form of fugitive emissions from the storage tanks on site and the associated valves, seals, etc. In addition to the general leak detection and repair requirements of 40 CFR 60 subpart KKK cited in the permit, an aggressive program for reducing emissions of VOCs from materials handling and storage is recommended to be included in this permit. The principal source(s) of fugitive VOC emissions at the plant should be identified and modified as necessary to reduce the both potential and actual emissions of this dangerous class of pollutants.



west virginia department of environmental protection

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Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
www.dep.wv.gov

February 17, 2012

Mr. Vincent Trivelli
The Law Office of Vincent Trivelli, PLLC
178 Chancery Row
Morgantown, WV 26505

Re: Response to Public Comments
Dominion Transmission, Inc.
West Union Plant,
Renewal Permit R30-01700011-2012

Dear Mr. Trivelli:

I would like to thank you for the comments received in this office on February 10, 2012 via letter on behalf of the Affiliated Construction Trades Foundation, a division of the West Virginia Building and Construction Trades Council, AFL-CIO.

The comment conclusions to require Dominion to replace their two older compressor engines with newer cleaner units, and to include an aggressive program to reduce VOC emissions from materials handling and storage in addition to existing 40 CFR 60 Subpart KKK requirements were noted. However, please be aware that West Union Plant's Title V renewal draft permit includes all the requirements applicable to the plant at this time, and the underling authority of Title V does not require engines 001-01 and 001-02 be replaced, nor any more LDAR requirements to reduce VOCs emissions be added.

In conclusion, DAQ would like to thank you again for your comments. If you have any questions regarding this response, please feel free to contact me at (304) 926-0499, extension 1220.

Sincerely,

Natalya V. Chertkovsky-Veselova
Title V Permit Engineer